

REMARKS

Claim 1 has been amended to correct an informality. Claims 4-6, 8-14, and 21-24 were withdrawn from consideration. Claims 7, 15-17, and 19-20 were canceled without prejudice or disclaimer. Accordingly, claims 1-3 and 18 are currently pending in the application, of which claim 1 is independent.

Applicants respectfully submit that the above amendments do not add new matter to the application and are fully supported by the specification.

Entry of the Amendment is proper under 37 C.F.R. §1.116 because it (a) places the application in *prima facie* condition for allowance for the reasons discussed herein; (b) does not raise new issues requiring further search and/or consideration by the Examiner because similar subject matter was previously considered by the Examiner and thus further consideration and/or search by the Examiner is not warranted; and (c) places the application in better form for appeal, should an appeal be necessary. For at least these reasons, entry of the present Amendment is therefore respectfully requested. Accordingly, Applicants request reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

Rejections Under 35 U.S.C. § 103

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966).

In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person of

ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed.

KSR Int'l. Co. v. Teleflex, Inc., 127 S. Ct. 1727, 82 USPQ2d 1385, 1396 (2007). The Federal Circuit requires that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).

Finally, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest every claimed feature. *See in re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claims 1-3 and 18 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,262,833 issued to Loxley, et al. ("Loxley") in view of U.S. Patent No. 4,041,481 issued to Sato ("Sato"). Applicants respectfully traverse this rejection for at least the following reasons.

As an initial point of clarification, Loxely relates to an electrophoretic display and is attempting to solve the problem of poor display quality in electrophoretic displays by selecting materials and surface treatments to improve image quality. Sato relates to reproduction and maintaining an image in a scanning apparatus for an electrophoretic display device. The instant application is related to a display device having electrowetting components, specifically comprising a driving means for driving the display device so as to achieve a variety of optical states.

In order to establish an obviousness rejection, the prior art relied upon must be from a "field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992)." Further, evidence of separate classifications is evidence of the non-

analogous nature of the technology. Since the materials and surfaces treatments of the electrophoretic display of Loxely and the scanning apparatus for an electrophoretic display device of Sato are from separate fields of endeavor from each other and are not reasonably pertinent to the particular problems set forth in the instant electrowetting display device, it is respectfully requested that the Examiner reconsider and withdraw the combination.

Furthermore, the Office Action fails to establish a *prima facie* case of obviousness of claim 1 at least because even if combined, Loxley and Sato fail to disclose or suggest every claimed feature.

Claim 1 recites, *inter alia*:

wherein **during selection of the at least one picture element**, the driver provides variable voltages to the picture element prior to applying **a fixed voltage associated with an electro-optical state of the picture element that corresponds to a desired image grayscale to be set**, the provided variable voltages having a mean voltage substantially equal to the fixed voltage.
(emphasis added)

The Office Action acknowledges that Loxley fails to teach this feature and relies on Sato to cure this deficiency in Loxley (page 3). Applicants disagree. Sato also fails to teach this feature for at least two reasons.

First, per claim 1, the driver provides the variable voltages and the fixed voltage “during selection of the at least one picture element” In rejecting claim 1, the Office Action cites Sato’s Erase Period T_E of Figs. 7A-I as taking place “during selection of the at least one picture element” because “it is obvious that cells must be selected for erasing and writing images” (page 3). The rejection of claim 1 cannot be supported based on this unreasonably broad claim interpretation. Applicants understand that claim terms are given their broadest reasonable interpretation, but that interpretation must be consistent with the specification, and it “must also be consistent with the interpretation that those skilled in the art would reach” MPEP § 2111.

Here, as a person of ordinary skill in the art would understand, Sato's Erase Period T_E of Figs. 7A-I does not take place "during selection of the at least one picture element." Rather, Sato teaches that cells are selected when a selecting pulse V_s is applied to an X electrode during the period T_S , which follows the Erase Period T_E and the pause interval T_P (col. 7, lines 27-32; Figs. 7A, 7B, & 7C). In fact, Sato is replete with references to "selecting pulse(s)" and "selected" [period], [X-line], [electrode], [cell]. Thus, based on Sato's disclosure, a person having ordinary skill in the art understands that selection of cells occurs during the periods T_S in the periods T_{X1} , T_{X2} , and T_{X3} (Figs. 7A-I). Consequently, the Office Action fails to establish a *prima facie* case of obviousness because it cites waveforms occurring during the Erase Period T_E and the pause interval T_P as teaching voltages provided "during selection of the at least one picture element." Simply put, the Office Action's interpretation of "during selection of the at least one picture element" is that of a layperson, not an ordinarily skilled artisan.

Second, per claim 1, the fixed voltage is "associated with an electro-optical state of the picture element **that corresponds to a desired image grayscale to be set**" (emphasis added). Here, the Office Action cites Sato's 0 volts applied during the pause period T_P as teaching the claim "fixed voltage," concluding that "0V during T_P would obviously produce a desired image grayscale of C11" (pages 3-4). The rejection of claim 1 cannot be supported based on this unreasonably broad claim interpretation. Simply put, as a person having ordinary skill in the art would understand, applying 0V during the pause period T_P does not correspond to "a desired image grayscale to set." Rather, Sato's data pulses V_1 having a +V or -V amplitude, and which are applied to the Y_1 , Y_2 , and Y_3 electrodes during the periods T_S in the periods T_{X1} , T_{X2} , and T_{X3} , are used to display desired image grayscales on the cells (col. 7, lines 30-36; Figs. 7A-I). Like above, the Office Action's interpretation here is that of a layperson, not an ordinarily skilled artisan, and the rejection of claim 1 cannot be maintained based on this flawed analysis.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claim 1. Claims 2-3 and 18 depend from claim 1 and are allowable at least for this reason. Since none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed invention, Applicants respectfully submit that independent claim 1, and all the claims that depend therefrom, are allowable.

Request for Rejoinder

Applicants respectfully request rejoinder of claims 4-6, 8-14, and 21-24. Claims 4-6, 8-14, and 21-24 were previously withdrawn, but Applicants respectfully submit that they depend from an allowable claim 1. Thus, under MPEP § 821.04, Applicants respectfully request that the restriction requirement for claims 4-6, 8-14, and 21-24 be withdrawn and that these claims be rejoined and fully examined for patentability under 37 C.F.R. § 1.104. Claims 4-6, 8-14, and 21-24 are allowable at least because they depend from an allowable base claim.

CONCLUSION

A full and complete response has been made to the pending Office Action, and all of the stated objections and grounds for rejection have been overcome or rendered moot.

Accordingly, all pending claims are allowable, and the application is in condition for allowance.

The Examiner is invited to contact Applicants' undersigned representative at the number below if it would expedite prosecution. Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

/hae-chan park/

Hae-Chan Park
Reg. No. 50,114

Date: October 24, 2011

CUSTOMER NUMBER: 58027
H.C. Park & Associates, PLC
8500 Leesburg Pike
Suite 7500
Vienna, VA 22182
Tel: 703-288-5105
Fax: 703-288-5139
HCP/NZH/cel